

migrants that usually arrive in southern Western Australia during spring (Common Sandpiper, Sharp-tailed Sandpiper, Red-necked Stint, Long-toed Stint and Curlew Sandpiper).

The range of species utilizing Lake Cassencarry and the populations of most highlight the importance of this ephemeral wetland.

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REFERENCES

BLAKERS, M., DAVIES, S.J.J.F. and REILLY, P.N. 1984. *The Atlas of Australian Birds*. Melbourne University Press, Melbourne.

THE DIBBLER (*PARANTECHINUS APICALIS* : DASYURIDAE) FOUND IN FITZGERALD RIVER NATIONAL PARK, WESTERN AUSTRALIA

By B.G. MUIR, National Parks Authority of Western Australia, Hackett Drive, Nedlands, 6009.

INTRODUCTION

In April 1984 a small, freshly dead marsupial was found on a track in the Fitzgerald River National Park, Western Australia, by the ranger in charge, George Duxbury. Not having seen an animal quite like it before, he froze it as quickly as possible and forwarded it to the Western Australian Museum for identification. The specimen was confirmed as a Dibbler, *Parantechinus apicalis* (Gray, 1842).

Sub-fossil remains of Dibbler in cave deposits indicate that when European man first colonised Australia the species probably ranged from the north-western end of the South-west Botanical Province at Shark Bay, to the eastern end of the Province at Israelite Bay on the Great Australian Bight in Western Australia; it also occurred on Eyre Peninsula, South Australia. Dibblers were not collected after 1884 (Ride 1970) and were presumed extinct when, in 1967, wildlife photographer Michael Morcombe captured two at Hassell Beach (then known as Cheyne Beach), 50 km east of Albany (Morcombe 1967). The same year another Dibbler was captured during a fauna survey of the same locality (Ride 1970).

Further searches for Dibblers were undertaken in the Hassell Beach area and later, following the killing of a Dibbler by a cat, near Jerdacuttup in 1976. Although another Dibbler was found on a different property near Jerdacuttup in late 1976 no more were recorded by surveys (Woolley 1977, 1980).

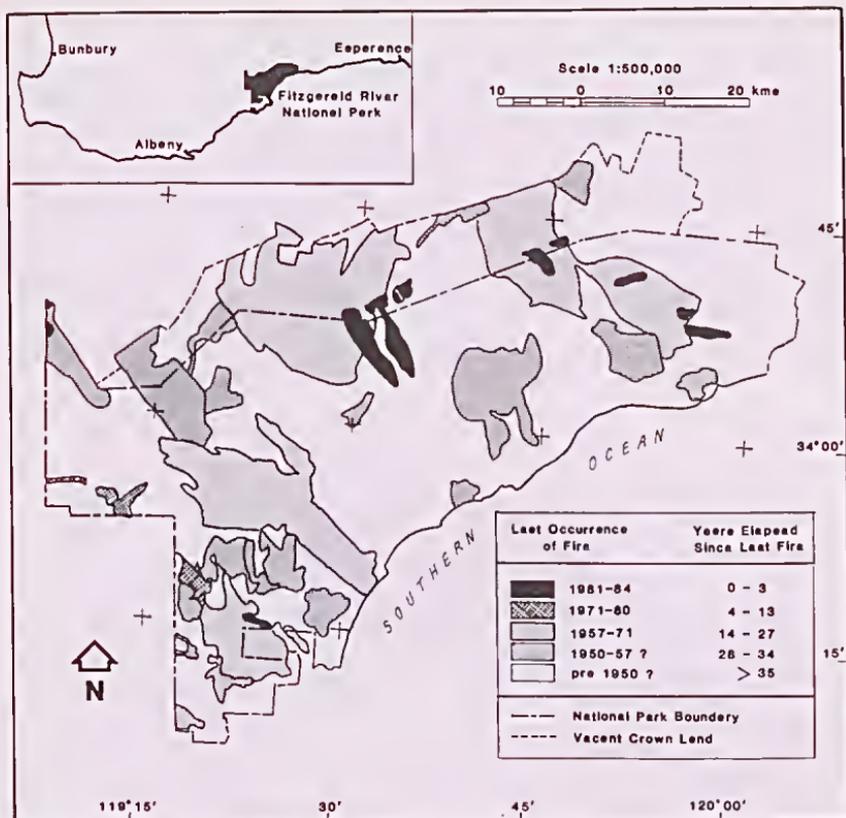
The finding of the latest specimen in Fitzgerald River National Park is important because it casts new light on the habitat requirements of the species and shows that the Dibbler is not yet extinct.

IMPLICATIONS OF THE 1984 FIND

The most recent Dibbler was found on autopsy to have been killed by a predator, probably a fox. Since it had been taken by a predator, the site of collection is not necessarily the place of capture. However, it is unlikely that a fox would transport prey more than two or three kilometres (D. King, pers. comm.) and it is considered that the point of capture occurred within that radius. Accordingly, vegetation types within that radius were examined, initially using Newbey's (1979) vegetation maps, then by field examination.

Most of the vegetation in the vicinity of the Dibbler site was sparse to dense mallee over heaths. This is unlike the habitat at Hassell Beach where Morcombe's Dibblers were collected (Woolley 1977). There were however, occasional dense thickets of proteaceous shrubs, mainly *Lambertia inermis*, which are not unlike the Hassell Beach habitat in physiognomy, if not in floristic composition.

One factor in common between the Hassell Beach habitat and the site in the Fitzgerald River National Park is the absence of fire for a long period. The Hassell Beach habitat had "not been burnt for many years" when Morcombe collected the two Dibblers in 1967 (Woolley 1977.) The map of the Fitzgerald River National Park and vacant crown land north of the Park showing vegetation age since last fire (Map 1) illustrates that much of the vegetation is also old. The hypothesis that age of the vegetation since fire is important has been proposed previously (Woolley 1980).



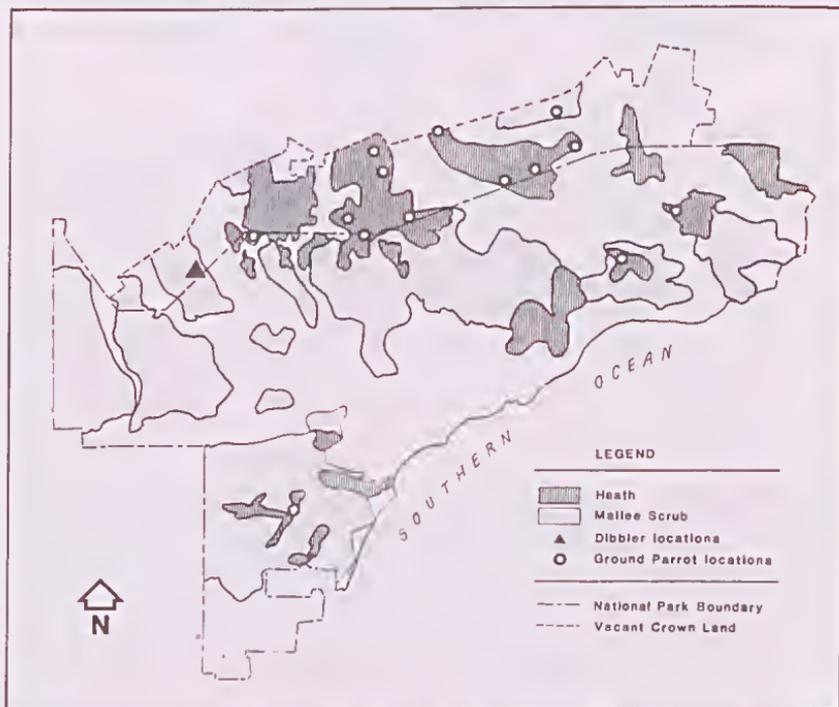
MAP 1. Fitzgerald River National Park, and vacant crown land to the north, showing fire patterns and ages of the vegetation. Over half the Park has not been burned for 30 years or more. Data from aerial photographs and National Parks Authority records.

Factors affecting the Dibbler and its habitats probably include land clearing, predators, disease and fire. Although land clearing has destroyed a great deal of native vegetation over the range of the Dibbler, several large reserves such as Hassell Beach and Fitzgerald River National Park apparently can still support Dibblers. Fire has been a frequent disturbance to most of the bushland throughout the Dibbler's range. It is likely that fire frequency and the area burned increased greatly with the coming of European man, particularly in agricultural areas where clearing burns were a common practice. The wide range of sub-fossil Dibbler records indicates that habitat physiognomy and floristics were probably not critical, but some other characteristics of the environment which changed drastically since about the mid-1800s may have been. This is almost certainly fire.

Fitzgerald River National Park contains a population of the Ground Parrot (*Pezoporus wallicus*), also considered rare and endangered. In the early days of settlement it occurred throughout the coastal plain in heaths from north of Perth to Albany (Serventy and Whittell 1976). Sightings at Irwins Inlet in 1912 and 1952, at Denmark in 1913 and at Hassell Beach in 1963, were amongst the most recent records prior to searches for them in the late 1970s by the Royal Australian Ornithologists Union. The birds have been found in the Fitzgerald River and Cape Arid National Parks in very old (long unburned) heaths (B. Newbey, D. Watkins pers. comm.). Its original distribution, its present distribution and its apparent preference for long unburned vegetation suggests strong parallels in habitat requirements to the Dibbler. Absence of fire may be the common denominator in survival of both these species.

Map 2 shows the distribution of heath and mallee shrubland habitats of both Ground Parrot and Dibbler and the known records of both species in Fitzgerald River National Park. The map shows that the majority of heaths lie in

the northern part of the Park and in the Vacant Crown Land (VCL) to the north, whereas the more shrubby vegetation tends to be further south. The division between the two major vegetation types is approximately the line of the scarps which are a prominent landscape feature lying parallel to, and a little south of, the northern boundary of the Park. Land to the north of the scarp is predominantly granitic in nature and to the south based on marine spongolite rocks. The Dibbler specimen was in country lying north of the scarp. A recent examination by Baynes (unpublished data) of hundreds of skeletal remains from a location south of the scarp, about 5 km east of Twertup, revealed no trace of Dibbler. This suggests that Dibbler may not have occurred in the southern parts of the Park, but only in the north where coincidentally Ground Parrot is still present in reasonable numbers. The requirement of the Ground Parrot and Dibbler for long unburned heath suggests that the VCL to the north of the Park may be vital to perpetuation of these species.



MAP 2. Distribution of heath and mallee-scrub (shrubland) in Fitzgerald River National Park and vacant crown land to the north. The largest areas of heath lie in the north whereas the mallee-scrub lies more in the south. Ground Parrot records are closely associated with the heath. The Dibbler, although associated with the mallee-scrub in the recent find, has not been recorded, even as fossils, in the southern part of the Park. Vegetation data adapted from Aplin 1971 (unpublished) and Newbey (1979) : Ground Parrot data from B. Newbey (pers. comm.).

For these reasons the VCL may be a vital component in the habitat diversity of the region permitting the continued existence of Dibblers and Ground Parrot. The apparent loss of Dibblers (and Ground Parrot) from Hassell Beach since about 1970 may have resulted from the encroaching modifications of caravan parks and off-road vehicles on native vegetation. The National Parks Authority management approach of minimising disturbance and burning of the Fitzgerald River National Park may have been instrumental in preservation of both Dibbler and Ground Parrot. Implications are that the vacant crown land should be managed in the same way, preferably by the same authority.

ACKNOWLEDGEMENTS

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BIBLIOGRAPHY

- MORCOMBE, M.K. 1967. The rediscovery after 83 years of the Dibbler, *Antechinus apicalis* (Marsupialia:Dasyuridae). *West. Aust. Nat.* 10:103-111.
- NEWBEY, K.R. 1979. *The Vegetation of Central South Coastal Western Australia*. M. Phil. Thesis, Murdoch University.
- SERVENTY, D.L. & WHITTELL, H.M. 1976. *Birds of Western Australia*. Univ. West. Aust. Press.
- RIDE, W.D.L. 1970. *A Guide to the Native Mammals of Australia*. Oxford Univ. Press, Melb.
- WOOLLEY, P. 1971. Observations on the reproductive biology of the Dibbler, *Antechinus apicalis* (Marsupialia:Dasyuridae). *J. Proc. R. Soc. West. Aust.* 54:99-102.
- WOOLLEY, P. 1977. In search of the Dibbler, *Antechinus apicalis* (Marsupialia:Dasyuridae). *J. Proc. R. Soc. West. Aust.* 59:111-117.
- WOOLLEY, P. 1980. Further searches for the Dibbler (*Antechinus apicalis*) (Marsupialia:Dasyuridae). *J. Proc. R.Soc. West. Aust.* 63:47-52.

FROM FIELD AND STUDY

Black Honeyeaters feeding on ash — Good rainfall and abundant wildflowers occurred throughout the Pilbara and Murchison districts in 1984. This resulted in many sightings of the Black Honeyeater (*Certhionyx niger*) which is highly nomadic but not commonly seen except in dry inland areas.

During August through to November, I recorded these birds in areas north of Meekatharra and Nanutarra, the Murchison River north of Geraldton and numerous other areas in the wheatbelt east and north of Perth. At three locations, I and others travelling with me witnessed unusual behaviour associated with these birds.

At Bilyuin Pool on the Upper Murchison on 9-10 August, I noticed a male Black Honeyeater coming to ground near an old campfire, to be quickly followed by two females. The male, after landing and hopping around the ash, flew up into a nearby Mulga tree. It then flew to various trees in the vicinity, returning frequently to the old fire place. The females, in quite a determined manner, picked up small nodules of grey ash and swallowed them, flying away several times with small pieces, but returning to pick more into their beaks. I watched these birds for about an hour. The grey ash was from a Mulga wood fire (*Acacia* sp.) about three weeks old; recent rains had put a slightly pitted crust on the surface.

Next morning I returned to the same spot to find four females and one male bird coming in and picking up nodules of ash from the remains of the fire. I saw the male pick up and swallow ash twice, but generally he seemed content to fly around in the area and occasionally land to pick without swallowing. No female seemed perturbed by other females while the male was present.

At a site approximately three kilometres west of Murchison Bridge at Galena, similar behaviour was seen on 12 September. With me were about twenty members of the Bird Observers Club of Victoria. We were about to break camp when two Black Honeyeaters - one male and one female, flew into an *Allocasuarina* tree above us. They then landed at the edge of our still glowing Mulga wood fire and started to pick up ash. This was apparently too hot for them as they then flew to the remains of an old fire bed, which I had used some five weeks previously. The female, observed by everyone present, was seen picking up and swallowing small nodules of ash. She then picked up several more small pieces and flew back to a branch. After about two minutes she also swallowed these.

Later, at the Ross Graham lookout on the Murchison River near Kalbarri, approximately 40 kilometres from the previous sighting, again near the remains of an old campfire, a pair of Black Honeyeaters (male and female) flew into the branches of a tree above our heads. The female flew down to the ash